



## General

### Guideline Title

Best evidence statement (BES<sup>t</sup>). Speech therapist directed use of video modeling for patients with autism spectrum disorder.

### Bibliographic Source(s)

Cincinnati Children's Hospital Medical Center. Best evidence statement (BES<sup>t</sup>). Speech therapist directed use of video modeling for patients with autism spectrum disorder. Cincinnati (OH): Cincinnati Children's Hospital Medical Center; 2012 Aug 22. 9 p. [18 references]

### Guideline Status

This is the current release of the guideline.

## Recommendations

### Major Recommendations

Definitions for the level of recommendation ("strongly recommended", "recommended", no recommendation made) and the types of evidence (1a-5b) and are presented at the end of the "Major Recommendations" field.

It is recommended that speech-language pathologists working with children with autism spectrum disorder incorporate the use of video based modeling into treatment plans to target either functional or imaginative play skills (Boudreau & D'Entremont, 2010 [4b]; Paterson & Arco, 2007 [4b]; Hine & Wolery, 2006 [4b]; Charlop-Christy, Le, & Freeman, 2000 [4b]; Charlop et al., 2010 [4b]; Sancho, Sidener, & Reeve, 2010 [4b]; Cardon & Wilcox, 2011 [4b]; Ozen, Batu, & Birkan, 2012 [4b]; MacDonald et al., 2009 [4b]; MacDonald et al., 2005 [4b]; D'Ateno, Mangiapanello, & Taylor, 2003 [5a]; Kleeberger & Mirenda, 2010 [5a]; Gena, Couloura, & Kynissis, 2005 [4b]).

Note 1: Targeting Functional Play Skills includes materials such as a flower planting activity (digging hole, put soil in, put flower in, cover with soil), shape sorters, or stacking toys, blocks, beads, musical toys (Cardon & Wilcox, 2011 [4b]; Hine & Wolery, 2006 [4b]).

Note 2: Targeting Imaginative Play Skills includes materials such as play sets (airport, zoo, veterinary, construction), baking sets and shopping carts (Boudreau & D'Entremont, 2010 [4b]; D'Ateno, Mangiapanello, & Taylor, 2003 [5a]; MacDonald et al., 2009 [4b]; Kleeberger & Mirenda, 2010 [5a]; Paterson & Arco, 2007 [4b]).

#### Definitions:

#### Table of Evidence Levels

Quality Level	Definition
1a† or 1b†	Systematic review, meta-analysis, or meta-synthesis of multiple studies

Quality Level	Definition
2a or 2b	Best study design for domain
3a or 3b	Fair study design for domain
4a or 4b	Weak study design for domain
5a or 5b	General review, expert opinion, case report, consensus report, or guideline
5	Local Consensus

†a = good quality study; b = lesser quality study

#### Table of Recommendation Strength

Strength	Definition
It is strongly recommended that...  It is strongly recommended that... not...	When the dimensions for judging the strength of the evidence are applied, there is high support that benefits clearly outweigh risks and burdens ( <i>or vice-versa for negative recommendations</i> ).
It is recommended that...  It is recommended that... not...	When the dimensions for judging the strength of the evidence are applied, there is moderate support that benefits are closely balanced with risks and burdens.
There is insufficient evidence and a lack of consensus to make a recommendation...	

Note: See the original guideline document for the dimensions used for judging the strength of the recommendation.

## Clinical Algorithm(s)

None provided

## Scope

## Disease/Condition(s)

Autism spectrum disorder (ASD), including pervasive developmental disability-not otherwise specified (PDD-NOS)

## Guideline Category

Management

## Clinical Specialty

Family Practice

Pediatrics

Speech-Language Pathology

## Intended Users

Advanced Practice Nurses

Nurses

Physician Assistants

Physicians

Speech-Language Pathologists

## Guideline Objective(s)

To evaluate, among pediatric patients with autism spectrum disorder (ASD), if speech therapist directed use of video modeling improves functional and imaginative play skills

## Target Population

Pediatric patients, ages 2-9 years, that have been diagnosed with autism spectrum disorder (ASD), including pervasive developmental disability-not otherwise specified (PDD-NOS)

Note: Patients with developmental disabilities other than autism, patients unable to attend to audio/visual scenes for less than 1 minute are excluded.

## Interventions and Practices Considered

Video modeling based interventions to target play skills and related scripted language skills

## Major Outcomes Considered

Functional and imaginative play skills

## Methodology

### Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

### Description of Methods Used to Collect/Select the Evidence

Search Strategy

- Databases: CINAHL, Medline, Cochrane Library, ASHA, PsychInfo, ERIC, Google Scholar.
- Search Terms: Video modeling, Video Modeling AND autism, Video modeling AND autism AND play.
- Limits, Filters, Search Dates: English language, Search Dates: 1995-2012
- Date Search Done: 5.8.2012

### Number of Source Documents

Following an extensive literature search, 14 articles met the inclusion criteria for critical appraisal

### Methods Used to Assess the Quality and Strength of the Evidence

Rating Scheme for the Strength of the Evidence

Table of Evidence Levels

Quality Level	Definition
1a† or 1b†	Systematic review, meta-analysis, or meta-synthesis of multiple studies
2a or 2b	Best study design for domain
3a or 3b	Fair study design for domain
4a or 4b	Weak study design for domain
5a or 5b	General review, expert opinion, case report, consensus report, or guideline
5	Local Consensus

†a = good quality study; b = lesser quality study

Methods Used to Analyze the Evidence

Systematic Review

Description of the Methods Used to Analyze the Evidence

Not stated

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Not stated

Rating Scheme for the Strength of the Recommendations

Table of Recommendation Strength

Strength	Definition
It is strongly recommended that...  It is strongly recommended that... not...	When the dimensions for judging the strength of the evidence are applied, there is high support that benefits clearly outweigh risks and burdens ( <i>or vice versa for negative recommendations</i> ).
It is recommended that...  It is recommended that... not...	When the dimensions for judging the strength of the evidence are applied, there is moderate support that benefits are closely balanced with risks and burdens.

Strength	There is insufficient evidence and a lack of consensus to make a recommendation...
Definition	

Note: See the original guideline document for the dimensions used for judging the strength of the recommendation.

## Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

## Method of Guideline Validation

Peer Review

## Description of Method of Guideline Validation

This Best Evidence Statement has been reviewed against quality criteria by two independent reviewers from the Cincinnati Children's Hospital Medical Center (CCHMC) Evidence Collaboration.

## Evidence Supporting the Recommendations

### References Supporting the Recommendations

Boudreau E, D'Entremont B. Improving the pretend play skills of preschoolers with autism spectrum disorders: The effects of video modeling. J Dev Phys Disabil. 2010;22(4):415-31.

Cardon TA, Wilcox MJ. Promoting imitation in young children with autism: a comparison of reciprocal imitation training and video modeling. J Autism Dev Disord. 2011 May;41(5):654-66. [PubMed](#)

Charlop MH, Dennis B, Carpenter M, Greenberg A. Teaching socially expressive behaviors to children with autism through video modeling. Educ Treat Child. 2010;33(3):371.

Charlop-Christy MH, Le L, Freeman KA. A comparison of video modeling with in vivo modeling for teaching children with autism. J Autism Dev Disord. 2000;30(6):537-52. [50 references] [PubMed](#)

D'Ateno P, Mangiapanello K, Taylor B. Using video modeling to teach complex play sequences to a preschooler with autism. J Posit Behav Interv. 2003;5(1):5-11.

Gena A, Couloura S, Kymissis E. Modifying the affective behavior of preschoolers with autism using in-vivo or video modeling and reinforcement contingencies. J Autism Dev Disord. 2005 Oct;35(5):545-56. [PubMed](#)

Hine JF, Wolery M. Using point-of-view video modeling to teach play to preschoolers with autism. Top Early Child Spec Educ. 2006;26(2):83-93.

Kleeberger V, Mirenda P. Teaching generalized imitation skills to a preschooler with autism using video modeling. J Posit Behav Interv. 2010;12(2):116-27.

MacDonald R, Clark M, Garrigan E, Vangala M. Using video modeling to teach pretend play to children with autism. Behav Interv. 2005 Nov;20(4):225-38. [15 references]

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MacDonald R, Sacramone S, Mansfield R, Wiltz K, Ahearn WH. Using video modeling to teach reciprocal pretend play to children with autism. *J Appl Behav Anal.* 2009 Spring;42(1):43-55. [PubMed](#)

Ozen A, Batu S, Birkan B. Teaching play skills to children with autism through video modeling: small group arrangement and observational learning. *Educ Train Autism Devel Disabil.* 2012;47(1):84.

Paterson CR, Arco L. Using video modeling for generalizing toy play in children with autism. *Behav Modif.* 2007 Sep;31(5):660-81. [PubMed](#)

Sancho K, Sidener T, Reeve S. Two variations of video modeling interventions for teaching play skills to children with autism. *Educ Treat Child.* 2010;33(3):421.

## Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

## Benefits/Harms of Implementing the Guideline Recommendations

### Potential Benefits

Improved functional and imaginative play skills

### Potential Harms

Not stated

## Qualifying Statements

### Qualifying Statements

This Best Evidence Statement addresses only key points of care for the target population; it is not intended to be a comprehensive practice guideline. These recommendations result from review of literature and practices current at the time of their formulation. This Best Evidence Statement does not preclude using care modalities proven efficacious in studies published subsequent to the current revision of this document. This document is not intended to impose standards of care preventing selective variances from the recommendations to meet the specific and unique requirements of individual patients. Adherence to this Statement is voluntary. The clinician in light of the individual circumstances presented by the patient must make the ultimate judgment regarding the priority of any specific procedure.

## Implementation of the Guideline

### Description of Implementation Strategy

An implementation strategy was not provided.

### Implementation Tools

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

## Institute of Medicine (IOM) National Healthcare Quality Report Categories

### IOM Care Need

Getting Better

Living with Illness

### IOM Domain

Effectiveness

## Identifying Information and Availability

### Bibliographic Source(s)

Cincinnati Children's Hospital Medical Center. Best evidence statement (BEST). Speech therapist directed use of video modeling for patients with autism spectrum disorder. Cincinnati (OH): Cincinnati Children's Hospital Medical Center; 2012 Aug 22. 9 p. [18 references]

### Adaptation

Not applicable: The guideline was not adapted from another source.

### Date Released

2012 Aug 22

### Guideline Developer(s)

Cincinnati Children's Hospital Medical Center - Hospital/Medical Center

### Source(s) of Funding

Cincinnati Children's Hospital Medical Center

### Guideline Committee

Not stated

### Composition of Group That Authored the Guideline

*Group/Team Leader:* Heather Reffitt, MS, CCC-SLP II, Division of Speech Pathology

*Support Personnel:* Patti Besuner, MS, RN, CPN, Evidence-Based Practice Mentor, Center for Professional Excellence/Research and Evidence-Based Practice; Gina Blume, MA, CCC-SLP II, Coordinator, Division of Speech Pathology

## Financial Disclosures/Conflicts of Interest

No financial conflicts of interest were found.

## Guideline Status

This is the current release of the guideline.

## Guideline Availability

Electronic copies: Available from the [Cincinnati Children's Hospital Medical Center Web site](#) .

Print copies: For information regarding the full-text guideline, print copies, or evidence-based practice support services contact the Cincinnati Children's Hospital Medical Center Health James M. Anderson Center for Health Systems Excellence at [EBDMInfo@cchmc.org](mailto:EBDMInfo@cchmc.org).

## Availability of Companion Documents

The following are available:

- Judging the strength of a recommendation. Cincinnati (OH): Cincinnati Children's Hospital Medical Center; 2008 Jan. 1 p. Available from the [Cincinnati Children's Hospital Medical Center Web site](#) .
- Grading a body of evidence to answer a clinical question. Cincinnati (OH): Cincinnati Children's Hospital Medical Center; 1 p. Available from the [Cincinnati Children's Hospital Medical Center Web site](#).
- Table of evidence levels. Cincinnati (OH): Cincinnati Children's Hospital Medical Center; 2008 Feb 29. 1 p. Available from the [Cincinnati Children's Hospital Medical Center Web site](#) .

Print copies: For information regarding the full-text guideline, print copies, or evidence-based practice support services contact the Cincinnati Children's Hospital Medical Center Health James M. Anderson Center for Health Systems Excellence at [EBDMInfo@cchmc.org](mailto:EBDMInfo@cchmc.org).

In addition, suggested process or outcome measures are available in the [original guideline document](#) .

## Patient Resources

None available

## NGC Status

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